

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	MM Docket 99-25
Creation of a Low Power Radio Service)	
)	

Comments of Jeff Sibert

The following comments are hereby submitted by Jeff Sibert, in response to the Fourth Further Notice of Proposed Rulemaking, MB Docket 99-25 released March 19, 2012. My interest in this proceeding is as a consulting engineer who is assisting several potential LPFM applicants.

I. Second Adjacent protections

LPFM applicants and licensees should be allowed to demonstrate that no actual interference will result to second adjacent stations just like translators are able to, using techniques such as the proven desired to undesired ratio. A translator operating at the same power, height, and other parameters as an LPFM will cause the same amount of interference. Since interference does not discriminate based on license service or programming, the same rules should apply to both services. Translators have been operating second adjacent to full power stations for years without any problem. The 2003 translator window brought forth many applicants proposing operation on second adjacent frequencies and almost every one of them granted a license on a second-adjacent channel is operating successfully. If problems are encountered, interference procedures required by the LCRA or existing commission policy can be used.

II. Directional antennas

The use of directional antennas should be allowed just as is done with every other service. Applicants proposing the use of directional antennas should be required to comply with the same provisions in section 74.1235 that translators do. Allowing the use of a directional antenna could help to eliminate interference that would otherwise make operation of an LPFM in certain areas impossible. Since the cost of a directional antenna and the necessary proof of performance is much higher than a non-directional, only applicants that have no other choice in frequencies or transmit locations would likely pursue this option.

III. Availability of fully-spaced channels

The Commission has requested comment on whether to require applicants to prove no fully spaced channels are available before requesting a second-adjacent waiver. I feel this requirement will unnecessarily reduce the number of LPFM channels available for applicants, particularly in urban areas, since there are normally many more second-adjacent channels available than third-adjacent. In Minneapolis, for instance, only one fully spaced third-adjacent channel is available (250), whereas there are many second-adjacent channels available for use by LPFM operators (231, 235, 255, 256, and 269). Forcing all LPFM applicants in Minneapolis to apply for a single channel would make it virtually impossible to meaningfully expand LPFM service and meet the congressional mandate to make channels available for LPFM.

The commission should not consider any factors in whether to allow the use of any second-adjacent frequency, but should instead allow the use of second adjacent frequencies in any case where the applicant can show no population will experience interference. It is in the best interest of the applicant to avoid the use of a frequency that will result in unnecessary interference, whether the interference is second-adjacent or third-adjacent. The applicant should be allowed to seek waiver of a second-adjacent or third-adjacent frequency in the same fashion that translator applicants have been able without needing to explain its reason for picking any particular channel. To do otherwise would simply create additional burdens for both the applicant and the Commission without actually benefiting anyone.

IV. Bona fide complaints

Because a single interference complaint could require the LPFM station to cease broadcasting, the commission must set a very high burden for those complaining of interference that the LPFM is truly at fault for causing the interference. Too low of a bar will deprive the local listening audience of programming and drain the LPFM's financial reserves. Bona fide interference complaints should generally be limited to the 100 dBu contour of the LPFM station. Outside of this area, the interfered with station must prove the LPFM station is not operating within the appropriate technical requirements (modulation, spectral mask, spurious emissions, etc). This provides some certainty to the LPFM applicant and establishes a uniform method for determining interference.

At a minimum, the FCC should instruct listeners to make complaints to the station receiving interference. The interfered with station should then submit to the Commission the specific areas of interference, type of receiver experiencing interference, audio samples of the interference received, and names, addresses, and other pertinent information about the listener. The listener receiving interference should be a disinterested party and the commission should verify this is the case before instructing the LPFM to cease operations. The LPFM station should also be allowed to engage in mitigation techniques such as replacement of the radio that is receiving interference or relocation of the LPFM transmit antenna.

V. Announcements

No other broadcaster is required to broadcast announcements about potential interference to other second or third adjacent stations except for LPFM stations. Although this section is required by the LCRA, the Commission should consider its experience with translator stations operating on second or third adjacent frequencies and recognize that interference is extremely unlikely. Therefore the smallest regulatory burden should be imposed. The commission should certainly suggest language to ensure that operators meet the requirement, but should allow LPFM operators some flexibility in the exact wording such as identifying the call signs or slogans of the second or third-adjacent station. A requirement to read the announcement should be no greater than once per day between the hours of 6am and midnight for the first three months, and once per week during the same hours for the last nine months. To ensure announcements are made during times of greatest listenership, one third of the announcements should be made between 7am and 9am. One third of the announcements should be made between 4pm and 6pm. The remaining announcements can be made at the LPFM operators discretion.

VI. Translator input on third-adjacent channels

The potential for interference to a translator's input on a second or third adjacent channels is very minimal. Many translators employ or could employ expensive FM receivers such as the Fanfare FT1AP which has a published alternate channel selectivity of 55dB¹, far greater than the 34 dB noted in the Mitre report or discussed by Section 6 of the LCRA. It would be very difficult for an LPFM operator with a properly engineered transmission facility to cause interference to a translator under these conditions.

Rather than dismiss applicants who do not meet the restrictions proposed in the FNPRM or the Mitre report, the Commission should allow LPFM operators who operate too close to have a condition placed on their construction permits that they will mitigate any interference to the input signal of the translator within the first full year of operations. Mitigation could include any techniques suitable to both parties, such as the LPFM operator purchasing and installing a new receiver or antenna for the translator, or the relocation of facilities. If interference occurs, it is certain to occur during the first year of operation and the translator operator will be certain to file a complaint of interference during this time.

LPFM applicants who would operate greater than 10 km from a translator whose input signal is third adjacent to the LPFM, or applicants who submit an exhibit showing they meet the requirements contained in the mitre report or that proposed in the FNPRM would have no condition imposed on their construction permit and would not be responsible for interference to the translator's input signal.

¹http://www.fanfarefm.com/products#!_pro-rcvrs and select FT1AP-T info.

VII. 250 watt LPFM proposal

The commission should allow low power stations to broadcast with 250 watts in all areas when available, including urban areas within the top Arbitron rated markets. The higher power would put the LPFM station at parity with translator stations which have been allowed to operate at 250 watts for years in all areas of the United States. Allowing increased power in urban areas as well as rural areas is especially important since 100 watts may not be enough to cover a small urban area with a useful signal. Building penetration suffers with lower powered signals due to the number of steel and concrete buildings.

To promote the greatest number of permits granted in the next window, the Commission may wish to only grant 250 watt upgrades to LPFM stations after the closing of the next new/major change filing window and limit upgrades to stations that have operated continuously for at least two years. An upgrade of up to 250 watts should be considered a minor change.

Since translators west of the Mississippi are allowed any combination and power and height up to 250 watts at approximately 100 meters HAAT, LPFM stations operating west of the Mississippi should be allowed the same as well. Stations east of the Mississippi would still be allowed 250 watts at approximately 30 meters. The use of contour protection should be required in addition to meeting the minimum contour distances for LP100 stations. LP250 stations could then be authorized any power and height combination up to the class maximum if it does not cause interference just as translator stations are allowed. This is allowed per section 3 of the LCRA because “the Federal Commission Commission shall not amend its rules to reduce the minimum co-channel and first- and second-adjacent channel distance separation requirements **in effect on the date of enactment of this Act**” (emphasis added). As long as the Commission does not reduce the LP100 distance separations, it is not prohibited from using contour protection and higher power limits.

VIII. 10 watt LPFM elimination

Although a 10 watt LPFM signal probably won't be very useful in most areas, it can be especially useful in some urban cores in order to serve a very local population when no other class of LPFM is available. These stations would be well suited to meet the needs of university students and small immigrant communities located within the urban cores of many major metropolitan areas. A 100 watt LPFM station might not fit but a 10 watt station will, and in a dense urban area may still serve several hundred thousand people. An applicant in a crowded market might be faced with only the choice of a 10 watt LPFM or nothing, and such applicant should be able to determine based on the predicted coverage whether the 10 watt signal can effectively serve their desired audience.

IX. IF interference protections

I support removing the IF interference rules for LP10 and LP100 stations so that they are in parity with the rules for translators². The IF rules would still apply for LP250 class stations operating with greater than 100 watts.

X. Tribal priority for native nations

I feel out of fairness to all applicants there should not be a priority for native nations. This creates a level playing field for all applicants and does not harm those who wind up being mutually exclusive to the tribal application. However, I would support allowing native tribes some flexibility to file a major change application to select a different frequency following the close of the application window provided the major change application resolves all mutual exclusivities and creates a grantable singleton.

XI. Cross ownership of LPFM and translator stations

I generally oppose the use of ownership of translators by LPFM stations and generally encourage the Commission to avoid expanding its use. Since most LPFM stations will be located in spectrum limited areas, a translator would likely take away a frequency that could be used to bring other local voices to the air. It is spectrally inefficient to allow a local entity the use of two frequencies when there is a high demand for spectrum.

I would, however, support the limited use of a translator located on the same frequency and synchronized using commercially available techniques (similar to a booster). Such translator could be fed using any available method. This minimizes the interference area and provides the most spectrally efficient manner to extend service. Modern transmitters such as the Nautel NV are very capable of synchronizing the two transmitters such that the interference area is negligible and LPFM operators can decide whether the cost of engineering such a system is worth the increase in service area. This method is used successfully by many FM boosters and there is no reason it could not be applied to other services. The service area of the translator must be equal to or less than that of the LPFM and the applicant must prove that operation of the translator would not preclude other LPFM or translator applicants from operating on that frequency. The translator should receive no protection from any other service (including other LPFM and translator stations) and would be prohibited from relaying any other station but the co-channel LPFM. As long as the translator would not implicate Ashbacker and would forever only be used to relay the LPFM station, LPFM applicants should be allowed to apply for the translator outside of a filing window

²Although there are no IF protections for translators operating under 100 watts, the rule should be extended to LPFM stations operating with up to 100 watts. This simplifies the licensing for LP10 and LP100 stations while creating no significant difference in interference. Requiring IF protections for LPFMs at exactly 100 watts would simply create additional processing burdens for FCC engineers with no noticeable benefit.

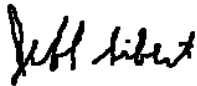
XII. Consortia

Although the Commission has good intentions by granting points to organizations who will work together as a consortium, in practice it is likely that whomever can bring as many entities into the filing process will receive a permit, whether or not all of those entities are actually interested. The FCC points out in the FNPRM that there is a possibility for abuse and sought comment on this. I agree there is too much chance for abuse of this process and therefore I do not support this change. The better method would be for each organization that actually intends to operate a station file separately as is currently done today.

XIII. Local origination

The commission requested comment on whether to award two points to entities that locally originate more than eight hours per day. I do not believe this is necessary. Local origination is very poorly defined by the Commission such that an applicant can meet this threshold simply using an mp3 player as their program source for eight hours per day. If the Commission wishes to encourage more local origination by awarding additional points, it needs to more carefully define what is considered local origination and what is not. At a minimum, the use of computer automation systems and portable playback devices should not count towards local origination.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jeff Sibert".

Jeff Sibert

May 7, 2012
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